

REMARKS

Summary of Office Action

Claims 1-28 are pending in the present application. In the Office Action of June 23, 2006, the Examiner withdrew from consideration claims 26-28 as including recursive and confusing dependencies. The Examiner provisionally rejected claim 24 on the ground of non-statutory double patenting over claims 1-23 of co-pending U.S. Application Serial No. 11/107,031. The Examiner next rejected claims 1 and 21-24 under 35 U.S.C. § 102(a) as being clearly anticipated by Ahuja et al. (U.S. Patent No. 6,411,603). The Examiner also rejected claims 1 and 21-24 under 35 U.S.C. § 102(b) as being clearly anticipated by Johnson et al. (U.S. Patent No. 5,995,602). The Examiner objected to claims 2-20 as being dependent upon a rejected base claim, but indicated that the claims would be allowable if rewritten in independent form. Applicant appreciates the Examiner's indication of the allowability of the subject matter of claims 2-20.

Correction of Claim Dependencies

The Examiner withdrew from consideration claims 26-28, "because the claim dependence is recursive and confusing." Applicant has amended claims 25-28 to correct the dependency issue therewith. As amended, claims 25-28 depend from claim 24. Accordingly, Applicant requests consideration and examination of claims 25-28.

Provisional Double Patenting Rejection

The Examiner provisionally rejected claim 24 on the ground of non-statutory double patenting over claims 1-23 of co-pending U.S. Application Serial No. 11/107,031, alleging that, "the claims, if allowed, would improperly extend the 'right to exclude' already granted in the patent." Any double patenting rejection requires consideration of a common question. The underlying question is, "is the same invention being claimed twice?" Simply, the claims of the pending application in comparison to the claims of U.S. Application Serial No. 11/107,031 evidence the independent and distinct nature of the claims of the co-pending applications. That is, whereas the present application is directed to a distribution network having autonomous control units constructed to define operation of the distribution network, U.S. Application Serial No. 11/107,031 discloses and claims an autonomous control system wherein individual distribution services are interconnected and operable via a plurality of autonomous cooperating

units. That is, each of the claims of U.S. Application Serial No. 11/107,031 calls for a plurality of control units, wherein the control units are configured across multiple distribution systems. Simply, U.S. Serial No. 11/107,031 discloses, enables, and claims an improvement over that which is disclosed and claimed in the present application.

The present application does not disclose, suggest, or teach autonomous cooperating units programmed to cooperatively implement a job command among autonomous control units as disclosed and claimed in co-pending application U.S. Serial No. 11/107,131. Accordingly, there can be no unjustified extension of the term of the right to exclude subject matter of the present claims as the claims of the co-pending application do not claim the same or an obvious variant of the subject matter of the presently pending application. Accordingly, Applicant respectfully requests reconsideration of the provisional double patenting rejection.

Prior art Rejections

Rejection under 35 U.S.C. §102 by Ahuja et al.

The Examiner rejected claims 1 and 21-24 under 35 U.S.C. §102(a) as being anticipated by Ahuja et al. Although Applicant appreciates the Examiner's extensive citation to the respective sections of the reference, Applicant respectfully disagrees that Ahuja et al. discloses, or even suggests, that which is called for in claim 1.

Claim 1 calls for, in part, a control system for a distribution network having a set of autonomous control units associated with at least some of a plurality of distribution endpoints and a set of autonomous control units associated with at least some of plurality of distribution resources. Claim 1 further calls for autonomous control units executing a stored program and communicating with each other to implement a set of money rules to allocate money resources to the consumers and a set of pricing rules for distribution resources and bid for distribution resources on behalf of consumers based on the money rules and pricing rules. Such a control protocol is not disclosed or suggested in Ahuja et al.

Ahuja et al. discloses a system wherein users are required to pay for use of links to realize the respective services. Abstract. Ahuja et al. states that, "a price is set on a per unit of flow basis, which varies from link to link depending on, among others, the current communication flow thereon." C. 2, ll. 65-67. Ahuja et al. further states that, "a user is provided with information concerning the cost based on the price on each link for realizing a new service,

which requires a certain volume of communication flow over network 120.” C. 3, ll.1-4. That is, there is no bidding for distribution resource on behalf of consumers as called for in claim 1. Rather, Ahuja et al. discloses a system wherein users are subject to the prices demanded by the providers and the providers are free to allocate those demands to respective links of the network 120.

Claim 1 further calls for a selection of distribution paths between producer and consumer endpoints using distribution resources based on bid responses. The system of Ahuja et al. does not disclose such a feature in as much there is no bidding for resource utilization, or selection of distribution paths, or distribution resources based on bids. That is, the system of Ahuja et al. allows providers to maximize distribution of demand across a plurality of links by dictating to consumers which network resource their request will be allocated to. That is not what is called for in claim 1 as cited above. Accordingly, Applicant believes that which is called for in claim 1 is not disclosed, or even taught or suggested, in Ahuja et al.

The Examiner also rejected claim 24 under 35 U.S.C. §102(a) as being anticipated by Ahuja et al. Applicant has amended claim 24 to further clarify that which is called for therein. As amended, claim 24 calls for, in part, control modules executing a stored program and communicating with each other to connect distribution resources on behalf of producers and consumers to provide distribution between producers and consumers as at least partially determined by a consumer priority. As disclosed in paragraph [0059] of the Specification, the control protocol of distribution and utilization of the producer/consumer network can be determined at least in part on a priority assignment associated with any given consumer.

There is no disclosure in Ahuja et al. for such a control protocol. That is, no one consumer will have a priority higher than any other. Simply, provided the network has capacity, consumers willing to pay the fees set by the producer associated with the temporal utilization of the network, and the network’s capacity to handle the usage dictates assignment of consumers to network links. Ahuja et al. states that, “each user dynamically devises his/her routing strategy subject to the similar action by other users to minimize his/her cost.” C. 4, ll.50-53. The user Ahuja et al. refers to is the service provider or owner of a respective network, not a client or consumer.

Ahuja et al. further states that, “such dynamic user actions can be modeled as a non-cooperative gain, which leads to the Nash equilibrium, from which no user finds it beneficial to deviate unilaterally.” C. 4, ll.53-55. Ahuja et al. continues, “when user i . . . requests a new service from server 150 which requires certain capacity, terminal 110- i transmits a request for such a service to network manager 105 through network 120” and that upon receiving the request through interface 113, processor 109 determines, among other things, the available capacity, and the aforementioned congestion level T_k and discount factor w_k for each link k , $1 \leq k \leq L$, and provides information concerning same to terminal 110- i .” C. 5, ll. 20-28. That is, a user’s utilization of the system of the network is strictly dictated by the user’s ability to cover the fees associated with the user’s requested network usage at any given time.

That is not what is called for in the present claims. The consideration of the consumer priority by the control modules as called for in claim 24 is not disclosed, or even taught or suggested in Ahuja et al. Accordingly, Applicant believes that which is called for in claim 24 and the claims that depend therefrom is patentably distinct thereover.

Rejection under 35 U.S.C. §102 by Johnson et al.

The Examiner next rejected claim 1 under 35 U.S.C. § 102(b) as being anticipated by Johnson et al. Applicant respectfully disagrees.

Claim 1 calls for, in part, a plurality of autonomous control units executing a stored program and communicating with each other to implement a set of money rules to allocate money resources to consumers and a set of pricing rules for distribution resources and bid for distribution resources on behalf of consumers based on the money rules and pricing rules. In this respect, Johnson et al. is substantially similar to Ahuja et al. That is, a consumer is unable to bid for distribution resource utilization. Rather, Johnson et al. discloses that the producers bid to establish prices for network resource utilizations for given durations. That is, Johnson et al. discloses a, “least cost routing” software that examines each call attempt and automatically decides which carrier is the best economic choice for that call. C. 1, ll.31-33.

Johnson et al. states that, “in this method and system, telecommunications switch route calls in accordance with economic incentives (e.g. least cost routing) resulting from a bidding process between participating telecommunication carriers (Carriers), administered by a bidding service provider through operation of a central processor, a computer referred to as a bidding moderator (Moderator).” C. 1, ll. 54-60. Johnson et al. further states that, “the Carriers receiving the information will have the opportunity thereafter to submit a lower or higher bid for any point-to-point routes on which they wish, respectively, to stimulate or discourage additional traffic.” C. 2, ll. 33-37. That is, the carriers or producers dictate and determine the price for any given network utilization.

Johnson et al. further states that, “each call attempt includes routing data identifying the call’s destination” and that “the switches least cost routing software then selects the carrier to which the call attempt shall be routed over outgoing line 13.” C. 5, ll.31-35. That is, Johnson et al. discloses a system wherein the lowest cost provider of network resources will always be chosen. There is no bidding for distribution resources on behalf of consumers based on money and pricing rules as called for in claim 1, as the pricing is always as expressly set and determined by the providers of the service. Like providers are bidding against each other but are not bidding on behalf of consumers based on money rules and pricing rules as called for in claim 1. Although the system of Johnson et al. encourages financial competition on the provider side of a consumer-producer relationship, the consumer in the system of Johnson et al. is simply allowed to utilize the lowest cost provider at any given interval.

Johnson et al. further discloses that, “the rules may include an instruction to route all calls in a particular time period (e.g. from midnight to 6 a.m.) to a particular Carrier to satisfy the requirements of a contract between the switch’s owner and that Carrier, or because that Carrier has contracted to carry all traffic during that time period for a flat monthly fee.” C. 9, ll. 55-60. Johnson et al. states that, “each Carrier has the opportunity to adjust its bids in view of the bids of the other Carriers for traffic over each route.” C. 10, ll. 49-51. Clearly, there is no bid for distribution resources on behalf of consumers based on money rules and pricing rules as called for in claim 1. Rather, Johnson et al. discloses a system wherein carriers competitively bid against one another and consumers are subject to the lowest price that the collective carriers are willing to offer. Accordingly, Johnson et al. does not disclose that which is called for in claim 1.

The Examiner also rejected claim 24 under 35 U.S.C. §102(b) as being anticipated by Johnson et al. As argued above with respect to claim 1, there is no disclosure in Johnson et al. for a control module executing a stored program and communicating with other control modules to connect distribution resources on behalf of producers and consumers to provide distribution between producers and consumers as at least partially determined by a consumer priority. That is, Johnson et al, as cited above, discloses a system wherein those willing to pay the fees generated by the Carrier bidding process, provided the Carrier distribution network can tolerate the additional demand, determines which consumers are entitled to utilize the distribution network. There is no disclosure, teaching, or suggestion in Johnson et al. to connect distribution resources on behalf of producers and consumers to provide distribution between the producers and consumers as at least partially determined by a consumer priority as called for in claim 24. Accordingly, Applicant believes that which is called for in claims 1 and 24, and the claims that depend therefrom, are patentably distinct over Johnson et al.

Indication of allowability

Applicant appreciates the Examiner's indication of allowability of claims 2-20. As argued above, Applicant believes claims 1 and 24 are also patentably distinct over the art of record. Applicant respectfully disagrees with the Examiner with respect to the art as applied and that in light of claims 21-23 and 25-28 depending from what are believed otherwise allowable claims, Applicant does not believe additional remarks are necessary and thus requests allowance of claims 21-23 and 25-28 at least pursuant to the chain of dependency.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present applicant is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-28. Applicant appreciates the Examiner's consideration of these amendments and remarks and cordially invites the Examiner to contact the undersigned, should the Examiner consider any matters unresolved.

Applicant: Rockwell Automation, Inc.
Serial No.: 10/737,384
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Although no fees are believed payable, the Examiner is hereby authorized to charge
Deposit Account No. 50-1170 for any fees that may be deemed necessary.

Respectfully submitted,

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Dated: August 30, 2006

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